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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BALBAN, SIMEON M

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,551

Applicant(s)

HEPPE ET AL.

Examiner

Simeon Marc Balban

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: ____

DETAILED ACTION

Information Disclosure Statement

1. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Drawings

2. The drawings are objected to because in **Figure 2** the letter "B" in the caption "Mobile user equipment operate in Network A and B" is missing. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. **Claim 1** is objected to under 37 CFR 1.75(a) as being in improper form because the term "network A" lacks antecedent basis. See MPEP § 608.01(k). Examiner is substituting the phrase "first one of the networks" in order to prosecute the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 5 - 7** are rejected under 35 U.S.C. 102(b) as being anticipated by Vialen et al. (Hereafter referred to as Vialen)(U.S. Patent Number 6,542,516).

Regarding **claim 1**, Vialen (see Figures 1, 3, 4, 5 and column 9 lines 3 - 19) discloses a hybrid radio apparatus (Figure 5) for a mobile radio station (100) capable of operating in at least two different radio networks simultaneously (302, 303) (column 3 lines 16 – 19), employing at least two different protocols (Figure 3 and column 3 lines 60 -63, column 4 lines 36 – 49), the hybrid radio apparatus (Figure 5) comprising:

a hybridization module (510) for at least one of the networks (302); and
radio equipment (504, 508, 509, 511) for at least a second one of the networks (303);

said hybridization module (510) comprising electronics and software necessary to emulate some or all protocols of the first network (302)(column 9 lines 17 – 20), and communicating at a peer level with protocols of the second network (303) resident in the hybrid radio apparatus (Figure 5), said emulation and peer level communication allowing an appearance of communication via first one of the networks (302)(column 4 lines 36 – 44).

Regarding **claim 5**, Vialen discloses the hybrid radio apparatus (Figure 5) as set forth in **claim 1**, wherein the hybrid radio apparatus (Figure 5) automatically decides to

operate via the first network (302), or the second network (303), when both the first network (302) and second network (303) are available, based on pre-set or user specified decision criteria (column 6 lines 2 – 9).

Regarding **claim 6**, Vialen discloses the hybrid radio apparatus (Figure 5) for a mobile station (100), the hybrid radio apparatus (Figure 5) comprising:

a hybridization module (510) which emulates protocols normally in one or several ground facilities providing services for a first network or system (302)(column 4 lines 36 - 44);

mobile radio equipment (504, 508, 509, 511) operating on a second network (303) or system which is different from the first network or system (302); and

mobile equipment (504, 508, 509, 511) usable with the second network (303) or system over the mobile radio equipment (504, 508, 509, 511) and over the first network or system (302) over the hybridization module (510) (see Figures 3, 5 and column 9 lines 3 – 19).

Regarding **claim 7**, Vialen discloses the hybrid radio apparatus (Figure 5) as set forth in **claim 6**, wherein the mobile equipment comprises a human interface (506, 507) and management unit (505)(see Figure 5 and column 9 lines 11 – 16).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2 - 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vialen et al. (Hereafter referred to as Vialen) (U.S. Patent Number 6,542, 516).

Regarding **claim 2**, Vialen discloses the hybrid radio apparatus as set forth in **claim 1**, wherein the hybridization module is tailored to a set of network protocols (see **claim 1**). However, Vialen fails to specifically disclose a hybridization module that is tailored to a set of network protocols which contains at least one member selected from the group consisting of ACARS, VDL/2, and VDL/4. However, the concept of having additional protocols in addition to those specifically disclosed by Vialen was well known in the art, as taught by Vialen.

Vialen discloses (see Figure 3 and column 4 lines 29 – 44) a generic protocol layer (304), which could be defined as any protocol.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Vialen to include any desired protocol including ACARS, VDL/2, or VDL/4 as a protocol included in the hybridization module (510) for the purpose of having a mobile radio able to handle multiple protocols in any desired communication environment.

Regarding **claims 3** Vialen discloses the hybrid radio apparatus as set forth in **claim 1** (see **claim 1**), wherein the radio equipment (504, 508, 509, 511) is designed to operate with a set of systems defined in the hybridization module (510). However,

Vialen fails to specifically disclose radio equipment, which is designed to operate with a set of systems which contains at least one member selected from the group consisting of ACARS, VDL/2, and VDL/4. However, the concept of having radio equipment designed to operate with additional systems in addition to those specifically disclosed by Vialen was well known in the art, as taught by Vialen.

Vialen discloses (see Figure 3 and column 4 lines 29 – 44) a generic protocol layer (304), which could be defined as any protocol. In addition, the radio equipment (504, 508, 509, 511) is defined in a generic fashion to allow for operation with the generic protocol or system (see column 9 lines 3 – 19).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Vialen to include ACARS, VDL/2, or VDL/4 as a protocol included in the hybridization module (510) and radio equipment (504, 508, 509, 511) adapted for the ACARS, VDL/2, or VDL/4 for the purpose of having a mobile radio able to handle multiple protocols in any desired communication environment.

Regarding **claim 4**, Vialen discloses the hybrid radio apparatus as set forth in **claim 1** (see **claim 1**), wherein the hybridization module (510) operates to allow different communication protocols, and the radio equipment (504, 508, 509, 511) is operable with these various protocols. However Vialen fails to specifically disclose a hybridization module operating for ACARS and radio equipment operable for the VDL/4 network. However, the concept of having a hybridization module and radio equipment designed to operate with additional systems in addition to those specifically disclosed by Vialen was well known in the art, as taught by Vialen.

Vialen discloses (see Figure 3 and column 4 lines 29 – 44) a generic protocol layer (304) in the hybridization module (510), which could be defined as any protocol. In addition, the radio equipment (504, 508, 509, 511) is defined in a generic fashion to allow for operation with a generic protocol or network (see column 9 lines 3 – 19). Additionally, Vialen discloses a hybrid radio apparatus (Figure 5) for a mobile radio station (100) capable of operating in at least two different radio networks simultaneously (see column 3 lines 16 – 19), employing at least two different protocols.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Vialen to include ACARS as a protocol included in the hybridization module (510) and radio equipment (504, 508, 509, 511) adapted for VDL/4 for the purpose of having a mobile radio able to handle multiple protocols in any desired communication environment.

Conclusion

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Narayanaswamy (U.S. Patent Number 6,295,457) and Korpela (U.S. Patent Number 5,946,634) disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simeon Marc Balban whose telephone number is (703) 305-8731. The examiner can normally be reached on M - F 8:30 AM - 5:00 PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D Banks - Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MB


CHARLES APPIAH
PRIMARY EXAMINER